1. An electric power-generating device comprising:

a main input shaft turned by a source of energy;

a synchronous generator operatively connected to said main input shaft, an output of said synchronous generator being AC electrical power;

a passive rectifier connected to said output of said synchronous generator, an output of said passive rectifier being DC electrical power; and,

an inverter connected to said output of said passive rectifier, an output of said inverter being AC electrical power.

2. The electric power-generating device of claim 1 wherein said device includes a plurality of synchronous generators operatively connected to said main input shaft.

3. The electric power-generating device of claim 2 further comprising a controller that brings each generator of said plurality of synchronous generators online sequentially in the event of low energy conditions of said source of energy to improve system efficiency at low power.

4. The electric power-generating device of claim 3 wherein said controller alternates the sequence in which said controller shifts the order in which said generators are brought online such that each generator receives substantially similar utilization.

5. The electric power-generating device of claim 1 wherein electric power-generating device is a wind turbine that includes said generator, and said passive rectifier, said wind turbine being located at the top of a tower and wherein said inverter is located at the bottom of said tower.

6. The electric power-generating device of claim 5 wherein a set of power cables conduct electrical power from the top of said tower to the bottom of said tower and wherein said power cables conduct DC electrical power.

7. The electric power-generating device of claim 6 wherein said set of power cables consist of two cables per generator.

8. The electric power-generating device of claim 1 wherein said passive rectifier comprises a plurality of diodes that convert AC electrical power into DC electrical power.

9. The electric power-generating device of claim 8 wherein said generator is a three-phase synchronous generator and wherein said passive rectifier comprises six diodes.

10. The electric power-generating device of claim 1 further comprising a controller that controls generator torque by regulating the current in said DC electrical power.

11. The electric power-generating device of claim 10 wherein the voltage of said DC electrical power is measured and used as an input to said controller.

12. The electric power-generating device of claim 11 further comprising a band pass filter for said voltage measurement that is tuned to measure vibrations in mechanical portions of said electric power-generating device at a predetermined resonant frequency and wherein said controller provides a generator torque signal that cancels and dampens vibrations.

13. The electric power-generating device of claim 1 further comprising a controller that measures vibrations in mechanical portions of said electric power-generating device and controls generator torque to actively dampen said vibrations.

14. The electric power-generating device of claim 13 wherein said controller measures said vibrations by measuring the voltage of said DC electrical power.

15. The electric power-generating device of claim 14 further comprising a band pass filter in said controller to filter said DC electrical power to a predetermined frequency that

corresponds to a mechanical resonance in said mechanical portions of said electric power-generating device.

16. A fluid-flow turbine comprising:

a blade for converting fluid-flow power into mechanical power;

a plurality of generators operatively connected to said blade for converting said mechanical power into AC electrical power;

a passive rectifier electrically connected to each of said generators for converting said AC electrical power into DC electrical power; and

an inverter electrically connected to each of said passive rectifiers to convert said DC electrical power into AC electrical power.

17. The electric power-generating device of claim 16 further comprising a controller for bringing each generator online sequentially in low fluid-flow conditions to improve system efficiency at low power.

18. The electric power-generating device of claim 17 wherein said controller alternates the sequence in which said controller shifts the order in which said generators are brought online such that each generator receives substantially similar utilization.

19. A fluid-flow farm comprising:

a plurality of fluid-flow turbines each of which converts fluid-flow power into AC electrical power at substantially unity power factor;

an electrical collection system that electrically connects each of said fluid-flow turbines to a substation wherein said electrical collection system is sized for operation of said fluid-flow turbines at substantially unity power factor; and

a dynamically adjustable power factor controller at said substation for adjusting the power factor of the aggregate output of said fluid-flow farm.

20. A fluid-flow farm comprising:

a plurality of fluid-flow turbines each of which converts fluid-flow power into AC electrical power at substantially unity power factor;

each one of said fluid-flow turbines comprising a blade which converts fluid-flow power into mechanical power, a synchronous generator operatively connected to said blade to convert said mechanical power into AC electrical power, a passive rectifier to convert said AC electrical power into DC electrical power, and an inverter to convert said DC electrical power into AC electrical power;

an electrical collection system that electrically connects each of said fluid-flow turbines to a substation wherein said electrical collection system is sized for operation of said fluid-flow turbines at substantially unity power factor; and,

a dynamically adjustable power factor controller at said substation for adjusting the power factor of the aggregate output of said fluid-flow farm.

21. An apparatus for generating electric power comprising:

first means for converting fluid-flow power into mechanical power;

a plurality of generators connected to said first means for converting said mechanical power into AC electrical power;

rectifying means connected to said plurality of generators for rectifying outputs of said generators to thereby convert said AC electrical power of said generators into DC electrical power; and

inverting means connected to said rectifying means for inverting said DC electrical power to thereby convert said DC electrical power to AC electrical power.

22. The apparatus of claim 21 further comprising:

means for bringing each of said generators online sequentially in low fluid-flow conditions to improve system efficiency at low power.

23. The apparatus of claim 22 wherein the order in which said generators are brought online is such that each generator receives substantially similar utilization.

24. An apparatus for generating electric power comprising:

a plurality of fluid-flow turbines, each of which converts fluid-flow power into AC electrical power at substantially unity power factor;

an electrical collection system for electrically connecting each of said fluid-flow turbines to a substation wherein said electrical collection system is sized for operation of said fluid-flow turbines at substantially unity power factor; and

means at said substation for dynamically adjusting the power factor of the aggregate output of said plurality of fluid-flow turbines.

25. A apparatus for generating electric power comprising:

a plurality of fluid-flow turbines, each of which utilizing a blade to drive synchronous generators that convert fluid-flow power into AC electrical power at substantially unity power factor;

converting means associated with each turbine for converting said AC electrical power of said synchronous generators into DC electrical power;

means for inverting said DC electrical power of each said synchronous generators of a turbine to thereby convert said DC electrical power to AC electrical power;

an electrical collection system for electrically connecting each of said fluid-flow turbines to a substation wherein said electrical collection system is sized for operation of said fluid-flow turbines at substantially unity power factor; and,

means for dynamically adjusting the power factor of the aggregate output of said plurality of fluid-flow turbines at said substation.

26. The apparatus of claim 25 further comprising:

a number of towers, one for each of said plurality of turbines;

each turbine and an associated converting means being located on top of one of said towers; and,

said means for inverting being located at a bottom of said tower.

27. The apparatus of claim 26 further comprising:

means for conducting DC electrical power electrical power from said converting means at said top of said tower to said inverting means at said bottom of said tower.

28. A method of generating electric power comprising steps of:

A. converting fluid-flow power into mechanical power;

B. utilizing a plurality of generators to convert said mechanical power into AC electrical power;

C. rectifying outputs of said generators to thereby convert said AC electrical power of said generators into DC electrical power; and

D. inverting said DC electrical power to thereby convert said DC electrical power to AC electrical power.

29. The method of claim 28 further comprising a step of:

E. bringing each of said generators online sequentially in low fluid-flow conditions to improve system efficiency at low power.

30. The method of claim 29 wherein in said step E the order in which said generators are brought online is such that each generator receives substantially similar utilization.

31. A method of generating electric power comprising steps of:

A. providing a plurality of fluid-flow turbines, each of which converts fluid-flow power into AC electrical power at substantially unity power factor;

B. electrically connecting each of said fluid-flow turbines via an electrical collection system to a substation wherein said electrical collection system is sized for operation of said fluid-flow turbines at substantially unity power factor; and

C. dynamically adjusting the power factor of the aggregate output of said plurality of fluid-flow turbines at said substation.

32. A method of generating electric power comprising steps of:

A. providing a plurality of fluid-flow turbines, each of which utilizing a blade to drive synchronous generators that convert fluid-flow power into AC electrical power at substantially unity power factor;

B. rectifying outputs of each said synchronous generators of a turbine to thereby convert said AC electrical power of said synchronous generators into DC electrical power;

C. inverting said DC electrical power of each said synchronous generators of a turbine to thereby convert said DC electrical power to AC electrical power;

D. electrically connecting each of said fluid-flow turbines via an electrical collection system to a substation wherein said electrical collection system is sized for operation of said fluid-flow turbines at substantially unity power factor; and,

E. dynamically adjusting the power factor of the aggregate output of said plurality of fluid-flow turbines at said substation.

33. The method of claim 32 wherein:

said step A of providing a plurality of fluid-flow turbines includes the step of providing a plurality of towers with each one of said turbines on top of one of said towers;

said step B of rectifying outputs of each said generators is performed at said top of said one tower; and,

said step C of inverting said DC electrical power of each said synchronous generators of a turbine to thereby convert said DC electrical power to AC electrical power is performed at a bottom of said one tower.

34. The method of claim 33 further comprising a step of:

F. conducting DC electrical power electrical power from said top of one tower to said bottom of said one tower prior to said step C of inverting said DC electrical power of each said synchronous generators of a turbine.